

## **REMARKS**

Reconsideration and withdrawal of the rejections of the pending claims are respectfully requested in view of the amendments and remarks herein, which place the application in condition for allowance.

### **I. STATUS OF CLAIMS AND FORMAL MATTERS**

Claims 1-6 and 9-17 are pending in this application. Claims 1-6, 11 and 14-17 have been withdrawn from further consideration. Claims 9, 10, and 12 have been amended to eliminate the dependency from the currently withdrawn claims, to delete "hydrogen" as a possible R<sup>4</sup> substituent and to amend the definition of A. Claim 13 has been cancelled. New claims 18-21 have been added. Support can be found throughout the specification as published and in particular in paragraphs 0004, 0011, 0124, and 0172. No new matter has been added.

It is submitted that the claims, herewith and as originally presented, are patentably distinct over the prior art cited in the Office Action, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. It is submitted that the amendments of the claims, as presented herein, are not made for purposes of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112. Rather, these amendments and additions are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

The issues raised by the Examiner in the Office Action are addressed below in the order they appear in the prior Action.

### **II. THE REJECTIONS UNDER 35 U.S.C. § 103(a) ARE OVERCOME**

Claims 9-10 and 12-13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Manning *et al.* (WO 98/28279) and in further view of Ribeill *et al.* (WO 00/35884). Applicants respectfully disagree and traverse the rejection.

The Examiner is respectfully reminded of the case law, namely, that there must be some prior art teaching which would have provided the necessary incentive or motivation for modifying the reference teachings. *In re Laskowski*, 12 U.S.P.Q. 2d 1397, 1399 (Fed. Cir. 1989); *In re Obukowicz*, 27 U.S.P.Q. 2d 1063 (BOPAI 1993). As stated by the Court in *In re Fritch*, 23

U.S.P.Q. 2d 1780, 1783-1784 (Fed. Cir. 1992): "The mere fact that the prior art may be modified in the manner suggested by the Office Action does not make the modification obvious unless the prior art suggests the desirability of the modification." Also, the Examiner is respectfully reminded that for the Section 103 rejection to be proper, both the suggestion of the claimed invention and the expectation of success must be founded in the prior art, and not Applicants' disclosure. *In re Dow*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988).

Furthermore, the Supreme Court has recently reaffirmed the factors set out in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18: "[T]he scope and content of the prior art are determined; differences between the prior art and the claims at issue are...ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727.

Applying the law to the instant facts, the references relied upon by the Office Action do not render Applicants' invention obvious.

The Office Action alleges that the general structures taught by Manning and Ribeill encompass the general class of 1-arylpyrazoles of the pending claims. The Examiner also asserts that Manning (claim 21) and Ribeill (claim 1) teach the methods for the control of pests in or on an animal which comprise administering to said animal a pesticidally effective amount of a corresponding compound of formula (I) or a salt thereof. The Examiner concludes that it would have been obvious to one of ordinary skill in the art, at the time of the instant invention to arrive at the instant method for controlling pests with the instant 1-arylpyrazoles based on the teachings of Manning and Ribeill with a reasonable expectation of success.

Contrary to the Examiner's assertion, one skilled in the art would not be motivated to derive the presently claimed methods for controlling pests which comprise applying a pesticidally effective amount of a 5-substituted alkylaminopyrazole compound of formula (I) based on the teachings of Manning in view of Ribeill.

Manning does not relate to the methods of pending claims as amended as none of the compounds shown by Manning in Table 1 are tertiary 5-amino pyrazoles derivatives as recited in the pending claims. Manning mainly relates to the preparation of the compounds of formula (I)

and only generally describes their pesticidal compositions and methods of use without presenting any data reflecting their pesticidal activity and successful application to the animals to control pests. Moreover, Manning does not relate to the activity of the described compounds against *Ctenocephalides felis*. As such, Manning does not render the claimed methods obvious.

Applicants respectfully submit that Ribeill does not teach or suggest the methods of the pending claims. Ribeill relates to the methods of controlling pests by applying 5-methylideneamino compounds of formula (I), which are structurally different from the compounds of the presently claimed methods. Furthermore, Ribeill does not relate to the administration of compounds of formula (I) at concentrations of 5ppm or less. Based on the data presented by Ribeill (pages 41-42, Biological Example), one skilled in the art would not be able to predict that a high level of pest control can be achieved by administering the compounds of the present invention at such low concentrations. Therefore, the pending claims are not obvious over Ribeill.

The present invention provides a new method for controlling pests by applying non-emetic compounds, which can be used in lower doses than the existing pesticides and therefore are safer to the environment, and also which can maintain a high level of oral control of flea and tick pests for a longer time period and consequently require less frequent dosing. Administration of the claimed 5-substituted alkylaminopyrazoles at low concentrations (5ppm or less) provides a more effective and safer method for control of pests than the methods described by Manning and/or Ribeill.

The Examiner further contends that the data presented in the specification suggests that the core of the molecule is all that is necessary for functionality, since the system can tolerate changes in the  $R^5S(O)_m$  and  $R^6CFX-S(O)_n$  positions, and that the applicants' data shows no unexpected results.

Contrary to the Examiner's assertion, the present invention provides unexpected results and improvements over the compounds of Manning and Ribeill as the present invention demonstrates efficacy against *Ctenocephalides felis* species using lower concentrations (5 ppm or less, as recited in Method A, paragraphs 0207-0208 of the specification as published) of the compounds encompassed by the amended claims to control 80% of the pest population. Neither of the references relates to such results. This unexpected efficacy is a result of further optimization of the previously known pesticidally active 1-arylpyrazole compounds. By

introducing certain  $R^4$ , A,  $R^5S(O)_m$  and  $R^6CFX-S(O)_n$  substituents, Applicants obtained the highly efficacious compounds which can be administered at much lower doses. As such the present invention relates to a further improved non-emetic and overall safety profile of the known methods of administering 1-arylpyrazole compounds for controlling pests.

Accordingly, it would not be obvious to one skilled in the art to derive the methods of the pending claims based on the reference by Manning in view of Ribeill as none of the cited references alone or in combination teaches or suggests the presently disclosed inventive methods for control of pests comprising administering 5-substituted alkylaminopyrazoles of formula (I).

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are respectfully requested.